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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,290	12/20/2005	Gernot Hertweck	HERTWECK, G ET AL-1 (PCT)	1060
25889	7590	10/31/2008	EXAMINER	
COLLARD & ROE, P.C. 1077 NORTHERN BOULEVARD ROSLYN, NY 11576			HWU, DAVIS D	
			ART UNIT	PAPER NUMBER
			3752	
			MAIL DATE	DELIVERY MODE
			10/31/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/540,290	<b>Applicant(s)</b> HERTWECK ET AL.	
	<b>Examiner</b> Davis D. Hwu	<b>Art Unit</b> 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 14 and 16-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14 and 16-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Response to Amendment***

1. Applicant's amendment and remarks of September 15, 2008 are entered and have been fully considered.
2. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 103***

4. Claims 14 and 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nally et al. in view of Yildirim et al. and Hasegawa (from IDS of June 26, 2008). Nally et al. disclose a sliding valve having a sliding sleeve 22 which is axially displaceable in a control cylinder 30 and which controls, with control faces on its outer periphery, at least one control opening in the control cylinder (in the orifice disk member 41), each control face bearing against the control cylinder (in which seat 40 is a part of), wherein the sliding sleeve 22 has a cavity through which fuel is fed, wherein in a closed state of the sliding valve, the control faces bear against a control opening and closes off the control opening. Yildirim et al. teaches a sliding valve having a sliding sleeve 5 which is axially displaceable in a control cylinder (1 and 2) and which controls, with control faces on its outer periphery, at least one control opening in the control cylindrical wherein the sliding sleeve in the region of the control faces, has a plurality of longitudinal slots 4 which form between them spring tongues 14 on which the control faces are disposed. Hasegawa teaches a sliding valve comprising an elastically

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deformable closure member 13 that flexible in the direction of the control cylinder. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Nally et al. by providing spring tongues and a plurality of longitudinal slots in the member 41 as taught by Yildirim et al. and an elastically flexible closure member as has been taught by Hasegawa.

5. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nally et al. in view of Yildirim et al. and Hasegawa and in further view of Seitter et al.

Seitter et al. teaches a fuel injector comprising two axially offset control openings 32 having adjoining nozzle bores. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device of Nally et al., Yildirim et al., and Hasegawa by providing at least two axially offset control openings as has already been taught by Seitter et al.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davis D. Hwu whose telephone number is 571-272-4904. The examiner can normally be reached on 8:00-4:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on 571-272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

/Davis D Hwu/  
Primary Examiner, Art Unit 3752